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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,100	03/25/2004	Tetsuya Ooshima	83388.0018	6656

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EXAMINER

CHOW, YUK

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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10/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/809,100

Applicant(s)

OOSHIMA ET AL.

Examiner

Yuk C. Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/10/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 13, 16, 17, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuno et al. (US Patent 5,467,102).

As to claim 11, Kuno teaches a portable information processing apparatus comprising: two display devices (Fig. 1(A, B)); two frames (Fig. 1(1, 2)) which mount thereon said two display devices respectively; and hinges (Fig. 1(3)) for coupling said frames with each other; wherein: said two display devices own a first display surface (Fig. 15A(B)) for executing an image display operation of predetermined resolution, and a second display surface (Fig. 15A(A)) for executing a character display operation in higher resolution than that of said first display surface (Col. 10 line 56- Col. 11 line 5); said two frames are pivotally supported by said hinges in an openable/closable manner (Fig. 2A, 2B); and when said two frames are closed, said first and second display surfaces are brought into such a condition that said first and second display surfaces are overlapped with each other and are folded into two displays while said hinges are set to a fulcrum (Fig. 2A), whereas when said two frames are opened, said first and second display surfaces are brought into a two-page spreading condition, while said hinges are set to the fulcrum (Fig. 1).

As to claim 13, Kuno discloses a portable information processing apparatus comprising: a frame (Fig. 1(1)) on which a display device having a display surface (Fig.1(A)) is mounted; a cover (Fig. 1(2)) for protecting the display surface of said display device; and a hinge (Fig. 1(3)) for coupling said frame to said cover; said frame and said cover are pivotally supported by said hinge in an openable/closable manner (Fig. 2A, 2B); and when said cover protects said frame, said cover is rotated while said hinge is set to a fulcrum so as to cover said display surface within said frame; whereas when the display surface within said frame is visually confirmed, said cover is rotated while said hinge is set to the fulcrum so as to expose said display surface (Col. 3 line 53- Col. 4 line 11).

As to claim 16, Kuno discloses a portable information processing apparatus as claimed in claim 13 wherein: a length of said frame along the longitudinal direction is made longer than a length of said cover along the longitudinal direction (Fig. 2B).

As to claim 17, Kuno discloses a portable information processing apparatus as claimed in claim 16 wherein: a portion of said frame which is not covered by said cover under such a condition that said cover and said frame are closed owns an outside display (Fig. 2B).

As to claim 21, Kuno teaches an image displaying method in the portable information apparatus recited in claim 11, wherein: a Web screen is displayed on said first display surface, and the electronic book is displayed on said second display surface (Col. 9 lines 4-50).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-10, 14-15, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuno et al. (US Patent 5,467,102) in view of Vincent et al. (US PG PUB 2004/0095309 A1).

As to claims 1, 2 and 3, Kuno discloses a portable information processing apparatus (Fig. 1) comprising:

two display devices (Fig. 1(A, B));

two frames (Fig. 1(1,2)) which mount thereon said two display devices respectively; and

hinges (Fig. 1(3)) for coupling said frames with each other; wherein:

a cylinder-shaped rotation portion is laterally rotated along a longitudinal direction and provided at a lower portion of said hinges; (Col. 7 line 54- Col. 8 line 10)

in the case that each of said display devices performs monochrome display (Col. 12 lines 10-41);

said two frames are pivotally supported by said hinges in an openable/closable manner (Fig. 2A, 2B); and

when said two frames are closed, two display portions are brought into such a condition that said two display portions are overlapped with each other and are folded

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into two displays while said hinges are set to a fulcrum (Fig. 2A), whereas when said two frames are opened, said two display portions are brought into a two-page spreading condition, while said hinges are set to the fulcrum (Fig. 1).

However, Kuno's differs from the claimed invention in that display device was not taught to necessarily own a display surface for displaying an image whose pixel size is smaller than, or equal to 127, 84.7 or 42.3 micrometer.

Vincent et al discloses a high-resolution display, which is capable of providing visual characteristics comparable to hard copy print, Vincent suggests that in order to comfortably view hard copy equivalent on a display panel, pixel size must be smaller than 127, 84.7, 42.3 micrometer, or even smaller (2.12 micrometer or 1200 dpi) depending on the high quality requirement [0083].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply high-resolution display of Vincent's into Kuno's portable display device because it is well known in the art the smaller pixel yields to a higher resolution display in a given size of a display panel.

As to claim 6, Kuno teaches a portable information processing apparatus comprising: two display devices (Fig. 1(A, B));

two frames Fig. 1(1, 2)) which mount thereon said two display devices respectively; and

hinges (Fig. 1(3)) for coupling said frames with each other; wherein:

each of said display devices owns a display surface;

said hinges own cylinder-shaped rotation portions which are laterally rotated along a longitudinal direction and at a lower portion of said hinges (Col. 7 line 54- Col. 8 line 10); said two frames are pivotally supported by said hinges in an openable/closable manner (Fig. 2A, 2B); and when said two frames are closed, two display portions are brought into such a condition that said two display portions are overlapped with each other and are folded into two displays while said hinges are set to a fulcrum (Fig. 2A), whereas when said two frames are opened, said two display portions are brought into a two-page spreading condition, while said hinges are set to the fulcrum (Fig. 1).

As to claim 7, Kuno teaches a portable information processing apparatus as claimed in claim 1 wherein: said rotation portions correspond to such shorter-side-at-top rotation portions which are laterally rotated along the longitudinal direction and at center lower portions of said hinges (Fig. 8A); and an image which is displayed on said display surface is changed by rotating said rotation portions (Col. 7 line 54- Col. 8 line 10).

As to claim 8, Kuno teaches a portable information processing apparatus as claimed in claim 1, or claim 6 wherein: a switch (Fig. 1(5)) required so as to operate said portable information processing apparatus is owned at one edge portion of any one of said two frames (Col. 3 lines 26-41).

As to claim 9, Kuno teaches a portable information processing apparatus as claimed in claim 8 wherein: under such a condition that said two display surfaces are overlapped with each other and are fold to two displays so as to be stored (Fig. 2A), said portable information processing apparatus has an outside display at such a

position of the other frame on which said switch is not mounted, said position being overlapped with the frame on which said switch is mounted (Fig. 2B).

As to claim 10, Kuno teaches a portable information processing apparatus as claimed in claim 1 wherein: said hinges own an indicator (Fig. 2B(10C)) for displaying a condition of a power supply; and said indicator can be visually recognized from an external area even under such a condition that said two display surfaces have been overlapped with each other (Fig. 6) and have been fold to two displays so as to be stored (Col. 5 line 53- Col 6 line 8).

As to claim 14, Vincent teaches a portable information processing apparatus as claimed in claim 13 wherein: said portable information processing apparatus comprises: a receiver capable of receiving information which is displayed on said display surface in a wireless communication manner (Fig. 7AA); a holder for storing thereinto a pen (Fig. 10AA) which is used to operate the information displayed on said display surface; and a switch (Fig. 8AA(807) used to operate the information displayed on said display surface.

As to claim 15, Vincent teaches a portable information processing apparatus as claimed in claim 13 wherein: said portable information processing apparatus comprises a means capable of changing the image displayed on said display surface into either a longer-side-ways image (Fig. 2AA) or a shorter-side-at-top image (Fig. 3AA).

As to claim 19, Kuno teaches an image displaying method in the portable information processing apparatus recited in claim 1, wherein: a page-turning-over operation (Fig. 7A) of an electronic book is carried out by that said electronic book is

displayed on said two display surfaces under two-page spreading condition, and said rotation portion is operated (Fig. 10A, 10B).

As to claim 20, Kuno teaches an image displaying method in the portable information processing apparatus recited in claim 9, wherein: a page-turning-over operation of an electronic book is carried out by that said electronic book is displayed on said two display surfaces under two-page spreading condition, and said rotation portion is operated; and bibliographic information containing a page position of the electronic book which is displayed on said display surfaces is displayed on said outside display in correspondence with said page-turning-over operation (Fig. 5, 6).

3. Claims 4, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuno et al. (US Patent 5,467,102) in view of Vincent et al. (US PG PUB 2004/0095309 A1) as applies to claim 1 and 17 above, and in further view of Sugimoto (US PG PUB 2002/0018027 A1).

As to claim 4, Kuno and Vincent teach a portable information processing apparatus as claimed in claim 1 above.

However, Kuno and Vincent do not teach hinges own a page-turning-over function by which pages of said electronic book are turned over.

Sugimoto teaches a hinge which has a page-turning-over function (Fig. 2B(6) also see [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate page-turning-over function of Sugimoto's into

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portable display device of Kuno's because this function is to emulating of a printed book.

As to claim 22, Sugimoto discloses an image displaying method in the portable information apparatus recited in claim 17, wherein: information for indicating a content of an image which is displayed on said display surface is displayed on said outside display (Fig. 12(17)).

4. Claims 12 and 18 are rejected under 35 U. S. C. 103(a) as being unpatentable over Kuno et al. (US Patent 5,467,102) in view of Yamazaki et al. (US Patent 5,339,091).

As to claims 12 and 18, Kuno teaches a portable information processing apparatus as claimed in claims 11 and 16 above.

However, Kuno does not teach portion of the frame on which said display device having said first display surface is mounted owns a solar cell.

Yamazaki teaches a paperless portable book utilizes solar cell (Fig. 1(6)) as a power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate solar power as in Yamazaki's invention into Kuno's portable display device because solar cell extends the operation time and reduces the weight of the device as suggests by Yamazaki (Col. 1 line 52-Col. 2 line 9).

Response to Amendment

5. Applicant's arguments filed 08/10/2007 have been fully considered but they are not persuasive.

Regarding claim 6, applicant asserts, "the applied reference does not disclose or suggest, said hinges own cylinder-shaped rotation portions which are laterally rotated along a longitudinal direction and at a lower portion of said hinges," However, examiner respectfully disagrees. In particular, cylinder-shaped hinges are commonly used for hinge-joined objects. In contrast, it will be rare to have a non cylinder-shaped hinge, such as triangle-shaped hinge.

6. Regarding claim 11, applicant submits, "said two display devices own a first display surface for executing an image display operation of predetermined resolution, and a second display surface for executing a character display operation in higher resolution than that of first display surface". Nonetheless, it will be reasonable to design and choose difference resolutions for a dual screen display, especially when the displays are used for difference purposes; there may also be a cost constraint to design one screen having lower resolution.

7. Regarding claim 13, applicant submits, "applied reference does not disclose or suggest...a display surface... and a cover for protecting the display surface..." However, examiner respectfully disagrees. Applicant's claimed subject matters are commonly known, it's a well known method to have a protected cover for any kind of display.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuk C. Chow whose telephone number is 571 270-1544. The examiner can normally be reached on 8-6 M-TH E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YC

10/12/2007


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